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Idaho Diesel Technology Standards Criticality Survey Results		Nice to Know	Need to Know	Critical to Know	Rating Average	Response Count
CONTENT STANDARD 1: SAFETY AND TOOLS						
Performance Standard 1.1: Demonstrate General Lab Safety Rules and Procedures						
1.1.1	Perform a quality job hazard analysis	5	7	12	2.29	24
1.1.2	Demonstrate the key attributes to contribute to an active safety culture	2	7	15	2.54	24
1.1.3	Utilize proper ventilation procedures for working within the lab/shop area	3	8	12	2.39	23
1.1.4	Identify marked safety areas	2	11	11	2.38	24
1.1.5	Identify the location and the types of fire extinguishers and other fire safety	3	7	14	2.46	24
1.1.6	Identify the location and use of eye wash stations	2	5	17	2.63	24
1.1.7	Identify the location of the posted evacuation routes	3	7	14	2.46	24
1.1.8	Comply with the required use of safety glasses, ear protection, gloves, and shoes during lab/shop activities (i.e., personal protection equipment – PPE)	0	6	18	2.75	24
1.1.9	Identify and wear appropriate clothing for lab/shop activities	1	5	18	2.71	24
1.1.10	Secure hair and jewelry for lab/shop activities	1	8	15	2.58	24
1.1.11	Locate and interpret safety data sheets (SDS)	4	11	9	2.21	24
1.1.12	Perform housekeeping duties	0	12	12	2.50	24
Performance Standard 1.2: Demonstrate Safe Handling and Usage of Tools						
1.2.1	Identify appropriate tools and their usage in diesel service applications	4	8	12	2.33	24
1.2.2	Identify standard and metric designation	2	10	12	2.42	24
1.2.3	Demonstrate safe handling and use of hand and power tools	1	8	15	2.58	24
1.2.4	Utilize safe procedures for handling of tools and equipment	1	7	16	2.63	24
1.2.5	Identify and use proper placement of floor jacks and jack stands	0	5	19	2.79	24
1.2.6	Identify situational tool restrictions	3	8	13	2.42	24
CONTENT STANDARD 2: BASIC VEHICLE SERVICE AT A DOT LEVEL						
Performance Standard 2.1: Identify and Utilize Vehicle Service Information		2	15	7	2.21	24
2.1.1	Locate and utilize paper and/or electronic service information	5	12	7	2.08	24
2.1.2	Locate and utilize Technical Service Bulletins (TSBs)	5	14	5	2.00	24
2.1.3	Demonstrate knowledge of special service messages, quotes, service campaigns/recalls, vehicle/service warranty applications, and service interval recommendations	3	18	3	2.00	24
2.1.4	Locate Vehicle Identification Number (VIN) and production date code	12	11	1	1.54	24
2.1.5	Analyze Vehicle Identification Number (VIN) information	5	17	2	1.88	24
2.1.6	Identify other vehicle information labels (such as tire, emissions, etc.)					
Performance Standards 2.2: Prepare A Vehicle For Service						
2.2.1	Identify information needed and the service requested on a repair order	2	13	9	2.29	24
2.2.2	Perform a 360° vehicle walk around inspection	2	13	9	2.29	24
2.2.3	Identify purpose and demonstrate proper use of fender covers, seat covers, and floor mats	5	12	7	2.08	24
2.2.4	Demonstrate use of the three C's (concern, cause, and correction)	2	9	13	2.46	24
2.2.5	Locate and review vehicle service history	7	14	3	1.83	24
2.2.6	Complete work order to include customer information, vehicle identifying information, customer concern, related service history, cause, and	4	13	7	2.13	24
Performance Standard 2.3: Prepare A Vehicle For The Customer						
2.3.1	Ensure vehicle is prepared to return to customer per school/company policy (floor mats, steering wheel cover, etc.)	5	11	8	2.13	24
CONTENT STANDARD 3: DIESEL ENGINE SERVICE						
Performance Standard 3.1: Perform Preliminary Engine Inspection						
3.1.1	Inspect fuel, oil, Diesel Exhaust Fluid (DEF) and coolant levels, and condition; determine needed action	2	15	7	2.21	24
3.1.2	Identify engine fuel, oil, coolant, air, and other leaks; determine needed action	1	12	11	2.42	24
3.1.3	Observe engine exhaust smoke color and quantity	3	16	5	2.08	24
3.1.4	Check and record electronic diagnostic codes	2	13	9	2.29	24
Performance Standard 3.2: Identify Diesel Engine Components						
3.2.1	Identify external base engine components related to common diesel engines	0	15	9	2.38	24

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3.2.2	Identify emission system components	3	11	10	2.29	24
Performance Standard 3.3: Understand and Diesel Engine Theory and Operation						
	Describe the operation of a diesel engine	1	7	16	2.63	24
	Describe the operations of a diesel engine's subsystems	1	11	12	2.46	24
CONTENT STANDARD 4: PREVENTATIVE MAINTENANCE INSPECTIONS						
Performance Standard: 4.1: Perform Presentative Maintenance Inspections						
4.1.1	Perform a Form A Preventative Maintenance Inspection per Technology & Maintenance Council standards	1	16	7	2.25	24
4.1.2	Perform a Form B Preventative Maintenance Inspection per Technology & Maintenance Council standards	2	16	6	2.17	24
4.1.3	Perform a CSA Safety Inspection per Department of Transportation Standards	3	15	6	2.13	24
CONTENT STANDARD 5: HYDRAULIC SYSTEMS						
Performance Standard 5.1: Understand Hydraulic Operation and Theory						
5.1.1	Identify hydraulic system theory and safety procedures	4	14	6	2.08	24
5.1.2	Read and interpret system diagrams and schematics	4	14	6	2.08	24
Performance Standard 5.2: Identify Base Hydraulic System Components						
5.2.1	Identify system fluid type and warning labels	4	13	7	2.13	24
5.2.2	Identify system type (closed and open) and verify proper operation	10	9	5	1.79	24
5.2.3	Determine pump type, actuators, and controls	11	7	5	1.74	23
CONTENT STANDARD 6 : BRAKE SYSTEM						
Performance Standard 6.1: Understand Brake Theory and Operation						
6.1.1	Identify brake safety procedures per system manufacturer and type	2	7	15	2.54	24
6.1.2	Identify brake components for air or hydraulic brake systems	2	10	12	2.42	24
6.1.3	Verbally describe friction material maintenance.	4	13	7	2.13	24
6.1.4	Identify wear limits in brake linings, drums and rotators	1	12	11	2.42	24
Performance Standards 6.2: Assess Air Brakes - Mechanical/Foundation Brakes						
6.2.1	Inspect and measure brake shoes or pads; replace friction lining	1	13	10	2.38	24
6.2.2	Inspect and measure brake drums or rotors; replace friction lining	1	13	10	2.38	24
Performance Standard 6.3: Perform Wheel Bearing Service and Repair						
6.3.1	Inspect and service wheel bearings according to manufacturer's specifications	1	10	13	2.50	24
CONTENT STANDARD 7: ELECTRIC/ELECTRONIC SYSTEMS						
Performance Standard 7.1: Understand General Electrical Systems						
7.1.1	Identify safety procedures related to electrical system service	0	10	13	2.57	23
7.1.2	Describe the distinctions between series, parallel, series-parallel circuits	2	14	7	2.22	23
7.1.3	Calculate total resistance in series, parallel, series-parallel circuits	8	11	4	1.83	23
7.1.4	Read and interpret electrical/electronic circuits using wiring diagrams	1	13	9	2.35	23
7.1.5	Check continuity in electrical/electronic circuits using appropriate test equipment	0	12	11	2.48	23
7.1.6	Check applied voltages, circuit voltages, and voltage drops in electrical/electronic circuits using appropriate test equipment	1	11	11	2.43	23
7.1.7	Check current flow in electrical/electronic circuits and components using appropriate test equipment	1	12	10	2.39	23
7.1.8	Check resistance in electrical/electronic circuits and components using appropriate test equipment	1	11	11	2.43	23
7.1.9	Locate shorts, grounds, and opens in electrical/electronic circuits	1	10	12	2.48	23
7.1.10	Inspect and test fusible links, circuit breakers, relays, solenoids, and fuses; replace as needed	0	11	12	2.52	23
Performance Standard 7.2: Perform Battery Service						
7.2.1	Identify battery type; perform appropriate battery load test; determine needed action	1	10	12	2.48	23
7.2.2	Determine battery state of charge using an open circuit voltage test	0	12	11	2.48	23
7.2.3	Inspect, clean, and service battery; replace as needed	0	12	11	2.48	23

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7.2.4	Inspect and clean battery boxes, mounts, and hold downs; repair or replace as needed	1	13	8	2.32	22
7.2.5	Charge battery using appropriate method for battery type	0	11	12	2.52	23
7.2.6	Inspect, test, and clean battery cables and connectors; repair or replace as needed	0	12	11	2.48	23
7.2.7	Jump start a vehicle using jumper cables and a booster battery or appropriate auxiliary power supply using proper safety procedures	0	8	15	2.65	23
7.2.8	Identify series and parallel systems. Perform battery capacitance test; determine needed action	3	12	8	2.22	23
Perform Standard 7.3: Perform Starting System Service						
7.3.1	Perform starter circuit cranking voltage and voltage drop tests; determine needed action	3	12	8	2.22	23
7.3.2	Inspect and test components (key switch, push button and/or magnetic switch) and wires and harnesses in the starter control circuit; replace as needed	2	13	8	2.26	23
7.3.3	Inspect and test, starter relays and solenoids/switches; replace as needed	1	14	8	2.30	23
7.3.4	Remove and replace starter; inspect flywheel ring gear or flex plate	1	16	6	2.22	23
7.3.5	Perform starter current draw test; determine needed action	1	14	8	2.30	23
Performance Standard 7.4: Perform Charging System Diagnosis and Repair						
7.4.1	Test instrument panel mounted volt meters and/or indicator lamps; determine needed action	4	14	5	2.04	23
7.4.2	Identify causes of a no charge, low charge, or overcharge problems; determine needed action	1	14	8	2.30	23
7.4.3	Inspect and replace alternator drive belts, pulleys, fans, tensioners, and mounting brackets; adjust drive belts and check alignment	1	12	9	2.36	22
7.4.4	Perform charging system voltage and amperage output tests; perform AC ripple test; determine needed action	3	12	8	2.22	23
7.4.5	Perform charging circuit voltage drop tests; determine needed action	4	11	8	2.17	23
7.4.6	Remove and replace alternator	1	12	10	2.39	23
7.4.7	Inspect, repair, or replace cables, wires, and connectors in the charging circuit	1	12	9	2.36	22
Performance Standard 7.5: Performa Lighting Systems Diagnosis Repair						
7.5.1	Identify causes of brighter than normal, intermittent, dim, or no headlight	3	15	5	2.09	23
7.5.2	Test, replace, and aim headlights	3	12	8	2.22	23
7.5.3	Test headlight and dimmer circuit switches, relays, wires, terminals, connectors, sockets, and control components/modules; repair or replace as needed	4	11	8	2.17	23
7.5.4	Inspect and test switches, bulbs/LEDs, sockets, connectors, terminals, relays, wires, and control components/modules of parking, clearance, and taillight circuits; repair or replace as needed	1	16	6	2.22	23
7.5.5	Inspect and test tractor-to-trailer multi-wire connector(s); repair or replace as needed	2	13	8	2.26	23
7.5.6	Inspect, test, and adjust stoplight circuit switches, bulbs/LEDs, sockets, connectors, terminals, wires and control components/modules; repair or replace as needed	1	15	7	2.26	23
7.5.7	Inspect and test turn signal and hazard circuit flasher(s), switches, relays, bulbs/LEDs, sockets, connectors, terminals, wires and control components/modules; repair or replace as needed	1	14	8	2.30	23
7.5.8	Inspect and test reverse lights and warning device circuit switches, bulbs/LEDs, sockets, horns, buzzers, connectors, terminals, wires and control components/modules; repair or replace as needed	1	14	8	2.30	23
CONTENT STANDARD 8: TRANSPORTATION CAREERS						
Performance Standard 8.1: Explore Transportation Careers						
8.1.1	Describe the history of the transportation industry and the effects on society	20	3	0	1.13	23

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8.1.2	Investigate new and emerging technologies in the transportation industry	15	8	0	1.35	23
8.1.3	Research the different career opportunities in the transportation career path	15	8	0	1.35	23
8.1.4	Describe personal decisions that impact career options	9	12	2	1.70	23
8.1.5	Establish short-term and long-term career goals	5	10	8	2.13	23
Performance Standard 8.2: Explore Industry Ethics and Standards						
8.2.1	Describe behaviors consistent with OSHA safety standards	4	16	3	1.96	23
8.2.2	Describe good environmental practices	4	17	2	1.91	23
8.2.3	Identify Department of Labor Federal Employment Laws	12	10	1	1.52	23
8.2.4	Demonstrate personal accountability and responsibility for your career and safety	3	7	13	2.43	23